

A<sup>2</sup>  
indicated in Table 1. The retrieved and curated information included in Table 1 represents only a partial list. The quality of the sequence data varied widely as is normal for the expressed sequence tags. Nevertheless, it was clear that this approach provided a great deal of useful information on the expression of serpentine receptor genes in a large number of different tissues. Only the retrieved sequences that are related to known serpentine receptors are included in Table 1. Other informative searches used known amino acid sequences of specific serpentine receptors from various species to retrieve expressed sequence tags. For these studies, BLAST 2.0 (Gapped BLAST and Graphical Viewer) with the advanced BLAST option was used. The tblastn program was used to search the dbEST database.--

**B. In the claims**

Please cancel claims 11 to 49 without prejudice.

Please amend claims 1, 2, 5, 7 and 9 to read as follows:

sub B<sup>1</sup>  
A<sup>3</sup>  
1. (Amended) A method of obtaining a composition substantially enriched in a specific cell type comprising:

contacting a sample of cells with at least one binding agent specific for a serpentine cell surface receptor indicative of a specific cell type or lineage such that the binding agent binds specifically to a cell or cells expressing the receptor in the sample; and

separating the cell or cells bound by the binding agent from the sample, thereby obtaining a composition substantially enriched in a specific cell type.

2. (Amended) The method of claim 1, further comprising separating from the cell or cells bound by the binding agent a cell or cells expressing at least one additional marker.

A4 B2 5. (Amended) The method of claim 4, wherein the antibody is a monoclonal antibody, a polyclonal antibody, or a derivative of said antibody.

A5 7. (Amended) The method of claim 1, further comprising analyzing the DNA of the cells to identify a sequence indicative of lineage.

A6 9. (Amended) The method of claim 7, wherein the analyzing is by Southern blot analysis.

Please add the following new claims:

--50. A method of obtaining a composition substantially enriched in a specific cell type comprising:

A7 contacting a sample of cells with at least one binding agent specific for a serpentine cell surface receptor such that the binding agent binds specifically to a cell or cells expressing the receptor in the sample;

separating the cell or cells bound by the binding agent from the sample, thereby obtaining a cell or cells expressing the receptor; and

separating from the cell or cells expressing the receptor a cell or cells that express at least one additional marker,

thereby obtaining a composition substantially enriched in a specific cell type.

51. The method according to claim 50, wherein the additional marker is selected from the group consisting of CD-34, Thy-1, rho, Cdw109, protocadherins and cell adhesion molecules (CAMs).

52. The method of claim 50, wherein the binding agent is selected from the group consisting of a ligand and an antibody.

53. The method of claim 50, wherein the binding agent is immobilized on a solid support.

A<sup>7</sup>  
54. The method of claim 50, further comprising analyzing the DNA of the cells to identify a sequence indicative of lineage.

55. The method of claim 54, wherein the analyzing is on a microchip.

56. The method of claim 54, wherein the analyzing is by Southern blot analysis.

57. The method of claim 50, wherein the at least one binding agent is multiplexed such that more than one binding agent is utilized simultaneously.--

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